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On-line Case Report

Metachronous stomal adenocarcinoma following abdominoperineal resection for rectal cancer

WA Townley, MS Kothari, J Meyrick-Thomas

Department of General Surgery, Watford General Hospital, Watford, UK

Although metachronous colorectal tumours are relatively common, they seldom occur at stoma sites. We present the case of a 57-year-old woman who developed a colostomy site malignancy. Possible associations and risk factors are discussed.

Key words: Colostomy – Colon – Metachronous – Adenocarcinoma

Metachronous tumours are reported to occur in up to 4% of cases following resection of colorectal cancers.[1] However, it is extremely uncommon for such lesions to arise at the site of a permanent colostomy. No previous case with demonstrable polyps and a metachronous adenocarcinoma at the stoma site has previously been reported. Here, we describe the case of a 57-year-old woman who developed a malignant tumour at a colostomy site 5 years after undergoing an abdominoperineal resection for a low rectal carcinoma.

CASE REPORT

A 52-year-old woman presented in 1999 with bright red rectal bleeding and weight loss. Rigid sigmoidoscopy revealed a low rectal tumour, 1 cm above the dentate line. No synchronous tumours were encountered at colonoscopy and a staging CT scan excluded metastatic spread in the abdomen or chest. She underwent a successful abdominoperineal excision and histology from the rectal tumour revealed a Dukes' stage A, moderately differentiated adenocarcinoma. She received no adjuvant treatment.

The patient's previous medical history included a uterine carcinoma, diagnosed in 1983, for which she underwent total abdominal hysterectomy followed at a later stage by radical pelvic and groin radiotherapy for groin recurrence. She was known to suffer from both scleroderma and Raynaud's disease. A family history of inflammatory bowel disease was also noted.

Over the ensuing 3 years following abdominoperineal excision for rectal carcinoma, she remained free from recurrence as judged by clinical examination, surveillance colonoscopy, pelvic MRI and ultrasound. On review in clinic in 2002, there was concern that her stoma site was becoming stenotic. However, this narrowing was not sinister in nature with the stoma still easily admitting a little finger. The stenosis was, in fact, attributed to scleroderma. Biopsies at the time revealed evidence of active inflammation and granulation tissue with possible mild dysplasia but no malignancy. She was re-assured and returned to 6-monthly follow-ups but failed to keep her next appointment. Her progress was uncomplicated until she presented to clinic in June 2004 with 2 polyps at her stoma site that had been rapidly enlarging over the previous 6–8 months. She described occasional stomal bleeding, but her main difficulty was fitting the colostomy bag. There was no functional disturbance of her stoma and no reported weight loss.

On examination an exophytic, irregular 3-cm lesion was readily visible at the lateral margin of the stoma site

Correspondence to: Mr Manish Kothari, Department of General Surgery, Watford General Hospital, Vicarage Road, Watford WD18 0HB, UK
Tel: +44 (0)1923 244 366; E-mail: m.kothari@imperial.ac.uk

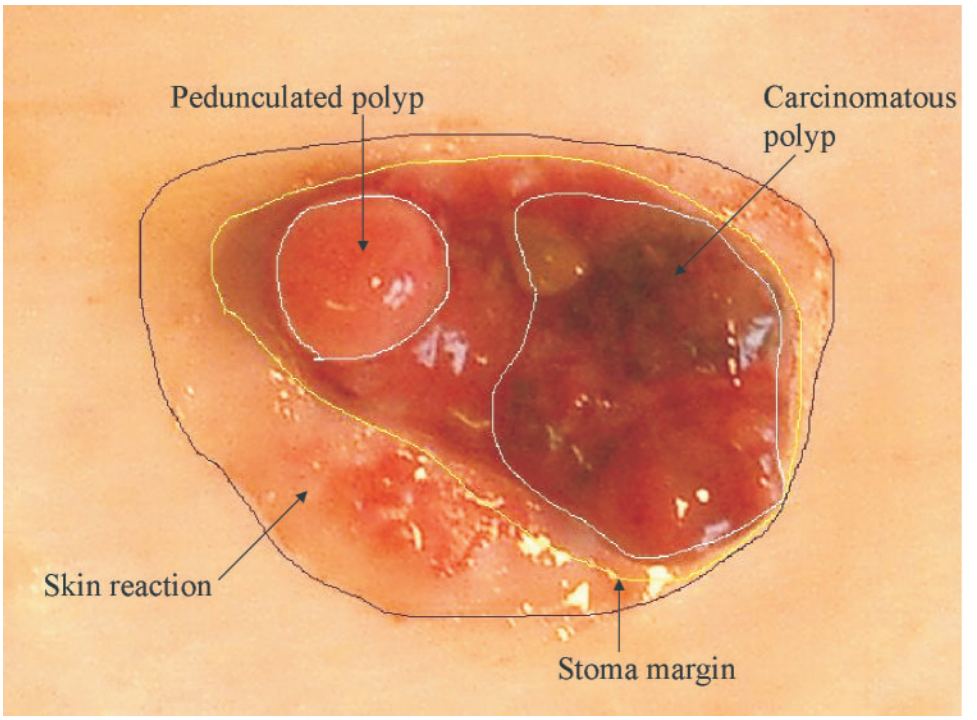

Figure 1 An exophytic, irregular 3-cm lesion at the lateral margin of the stoma site with a well-defined pedunculated polyp at the medial margin.

(Fig. 1). In addition, a well-defined pedunculated polyp was present at the medial margin. A finger passed easily through the stoma and no other masses were palpable. The laterally placed lesion was suspicious of malignancy and biopsy in clinic revealed adenocarcinoma. She was offered surgery and, at operation, the polyps were found to be 0.5 cm from the mucocutaneous junction and clinically not invading the surrounding skin. The stoma was excised with a 5 cm macroscopic bowel clearance including a full-thickness rim of the adjacent abdominal wall. A new stoma was refashioned. Her recovery was uncomplicated. Histopathology from the specimen revealed a Dukes' stage A, moderately differentiated adenocarcinoma. She remained well at 6 months' follow-up.

Discussion

Multiple primary colorectal carcinomas are not an unusual occurrence with a reported frequency of 4% in the literature.[1] Synchronous tumours are detected at the time of presentation of the original tumour whereas metachronous tumours appear some time after curative resection.

Our patient developed a metachronous tumour at her colostomy site, 5 years after undergoing abdominoperineal resection for rectal cancer. Primary colostomy site malignancies are extremely rare with just a handful of reported cases in the literature, whereas, ileostomy site malignancies are more widely reported and often associated with inflammatory bowel disease.[2–4] It is notable that our patient had previously suffered a uterine carcinoma and, more recently, a rectal adenocarcinoma, pointing to a possible strong genetic susceptibility to malignancy.

It has been suggested that prolonged stool contact may promote malignancy through changes in enterobacteria and bile acid circulation, raising the possibility that stoma stricture may predispose to malignancy through delayed colonic transit.[3,5] In the case presented, mild stenosis associated with active inflammation and mild dysplasia was noted at the stoma site, 2 years prior to overt malignancy. No further action was taken, as the stenosis was static and not associated with functional disturbance. Although the relevance of stoma stricture remains pure conjecture, the presence of mild dysplasia despite being reported as equivocal may well have represented the seeds of future malignancy. With hindsight, this merited closer follow-up including further biopsies. The case for performing further biopsies would be strengthened if our patient required more extensive surgery or adjuvant treatment. However, persisting dysplasia may have prompted revision of stoma earlier thus minimising chances of future recurrence of cancer.

Our patient suffered from scleroderma and it is not clear to what extent this may have contributed to stoma stricture. It is recognised that scleroderma is associated

with an increased risk of cancer but its significance in this case remains uncertain.[6] In this context, we aim to perform yearly colonoscopic assessments for potential strictures in her colon and indeed further metachronous lesions.

Conclusions

The occurrence of a metachronous colorectal carcinoma at a colostomy site is unusual and has so far evaded exhaustive aetiological scrutiny. In the case described, the contribution of various factors to the development of stoma site malignancy is discussed including stoma stricture with mild dysplasia, previous uterine malignancy and scleroderma.

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